

# **Epidemiology of Substance Use Disorders**

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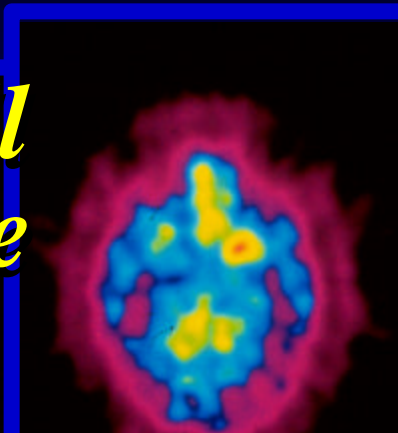
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**February 26, 2004**

# NIDA

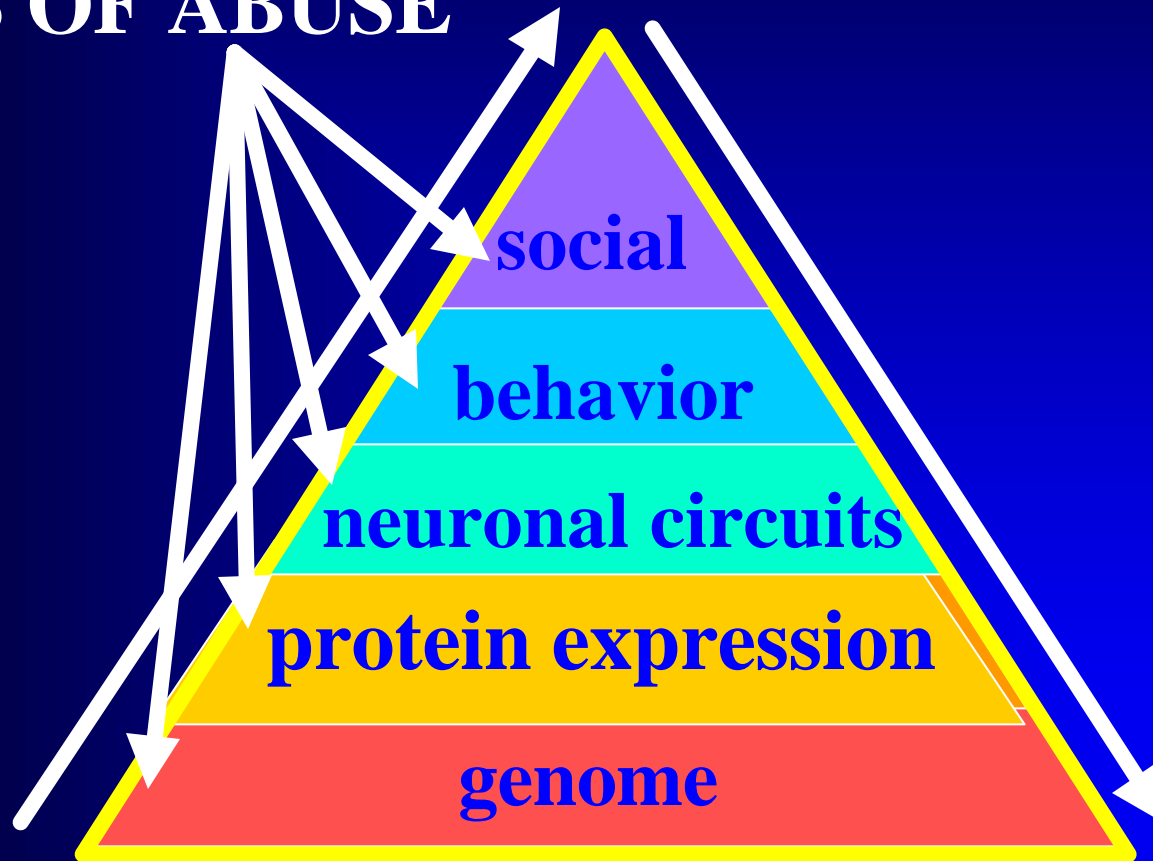
*Bringing the full  
power of Science  
to bear on...*

## Drug Abuse & Addiction



# **ADDICTION Requires a Systems Approach**

**DRUGS OF ABUSE**



# Priority Areas for NIDA

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- **Prevention Research (Children and Adolescents)**
  - Genetics
  - Development
  - Environment
  - Co-morbidity
- **Treatment Interventions**
  - New Targets & new Strategies
- **HIV/AIDS Research**
- **Training Researchers**
- **Collaborations with Other NIH Institutes and Other Federal, State and Local Partners**



# National Institute on Drug Abuse



**Within NIDA, the  
Division of Epidemiology,  
Services and Prevention  
Research provides a  
foundation for our  
Public Health Mission.**

## **What are the scientific implications of “providing a foundation for NIDA’s Public Health Mission”?**

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We use the tools of epidemiology to help determine need, provide clues about etiology, plan services, and determine effectiveness of interventions through measures of the impact on the health of a population.

# Outline

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- Variation in rates of use/addiction and variation between groups providing clues to causes.
- Gene/environment interactions as key to understanding causes.
- Putting epidemiology into action by examining the key features of drug abuse prevention sciences.



# Definition of Epidemiology

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- The study of the distribution of a disease or a physiological condition in human POPULATIONS and of the factors that influence this distribution

*Lillienfeld : Foundations of Epidemiology*

# Types of Epidemiology

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- Descriptive
  - Examining the distribution of a drug abuse in populations and observing the basic features of its distribution in terms of time, place, and person (e.g., cross-sectional study – Monitoring the Future; surveillance, CEWG)
- Analytic
  - Testing a specific hypothesis about the relationship of a disease to a putative cause - relate *exposure* to *disease* (e.g., cohort studies)

# **2003 Monitoring the Future Study**

## ***Summary of Findings***

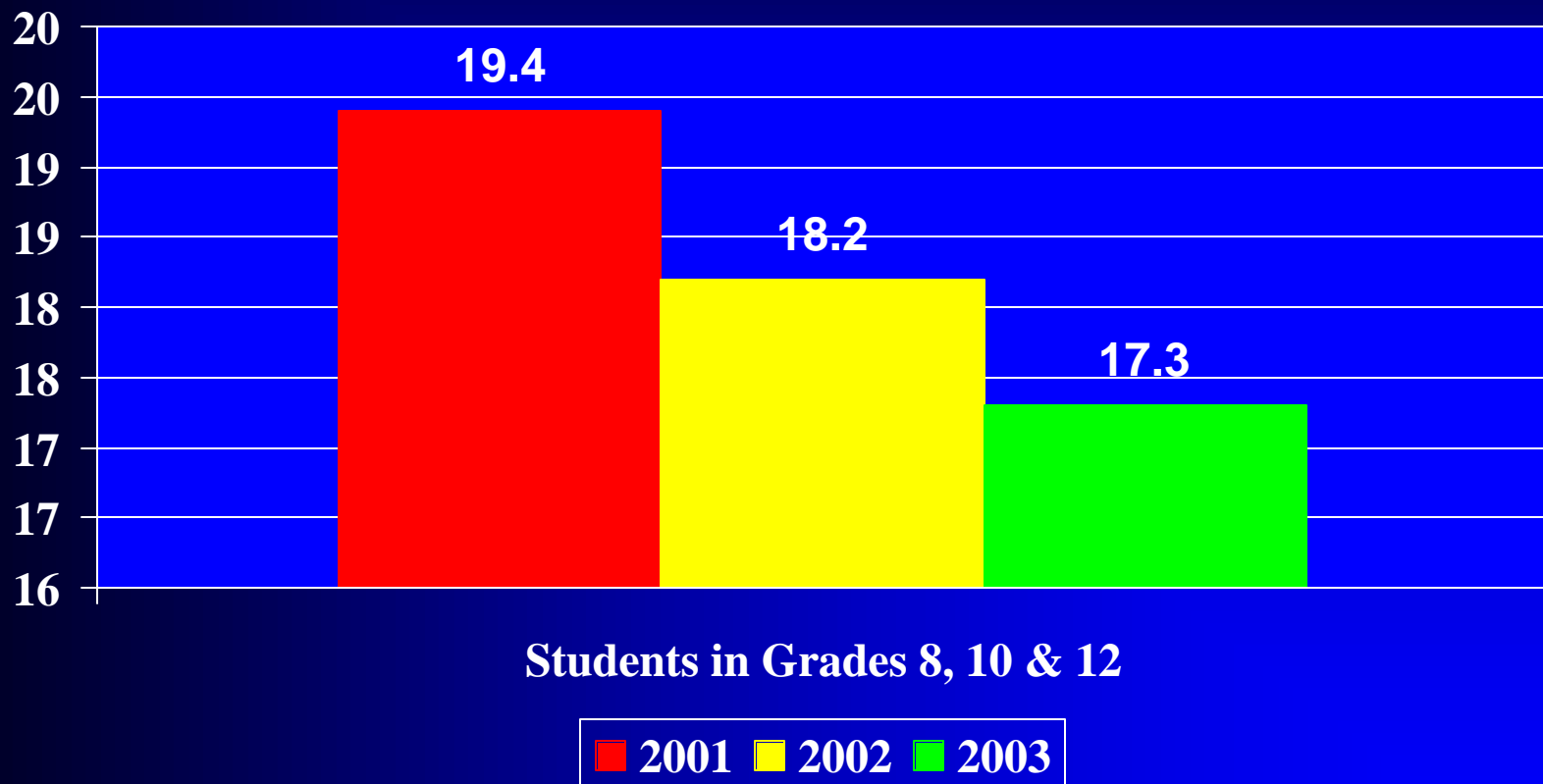
**Conducted by the University of Michigan  
under a research grant from the  
National Institute on Drug Abuse  
National Institutes of Health  
Department of Health and Human Services**

# 2003 Monitoring the Future Study

## *Survey Information*

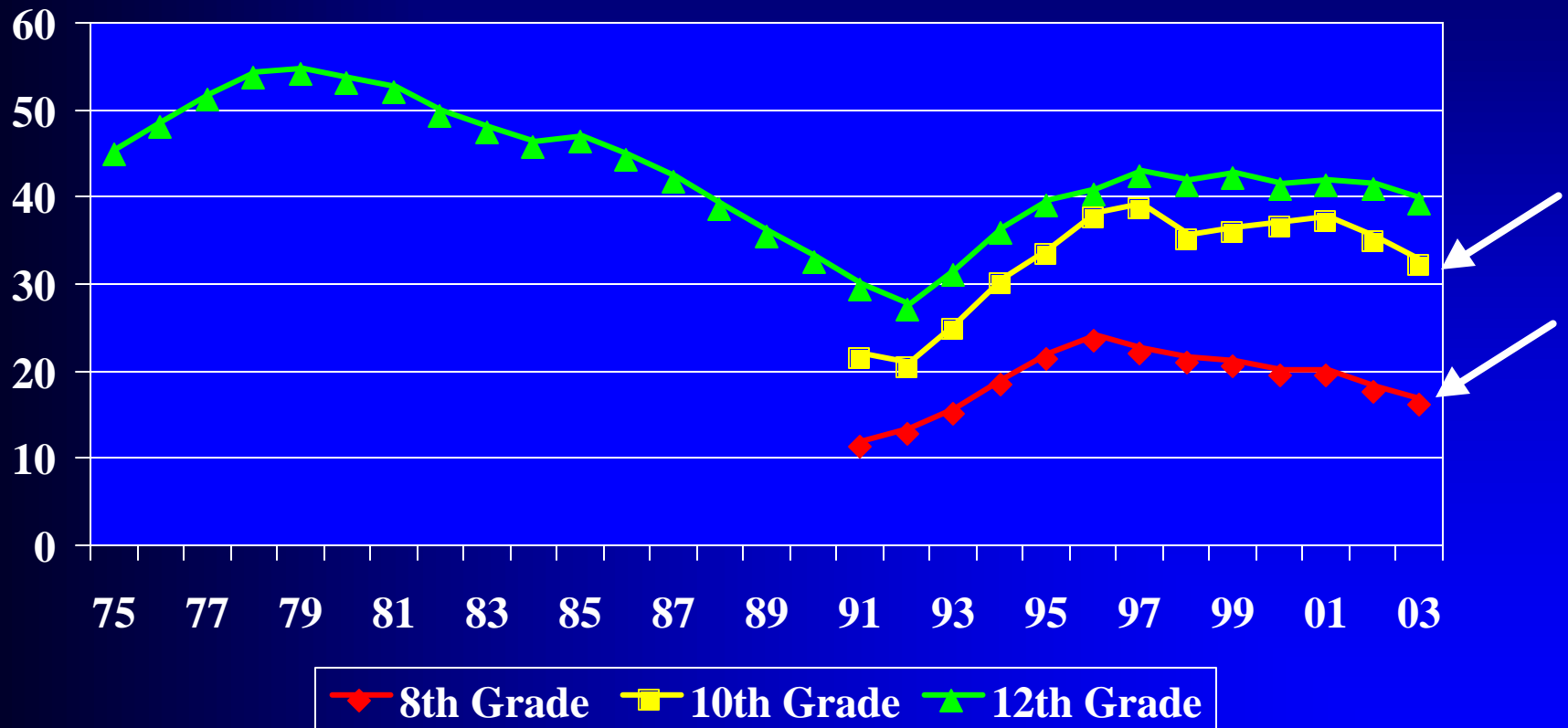
- Annual school survey conducted by the Univ. of Michigan under grant from the National Institute on Drug Abuse.
- Seniors surveyed since 1975; 8<sup>th</sup> and 10<sup>th</sup> graders since 1991.
- 2003 sample: 48,467 students in a nationally representative sample of 392 public and private schools.
- Questionnaires are administered to students in their classrooms by Univ. of Michigan staff each spring.
- Unless otherwise noted, increases and decreases discussed are statistically significant. On the graphs, statistically significant changes from 2002 to 2003 are indicated with arrows.

# Percent of Students Reporting *Past Month* Use of Any Illicit Drug

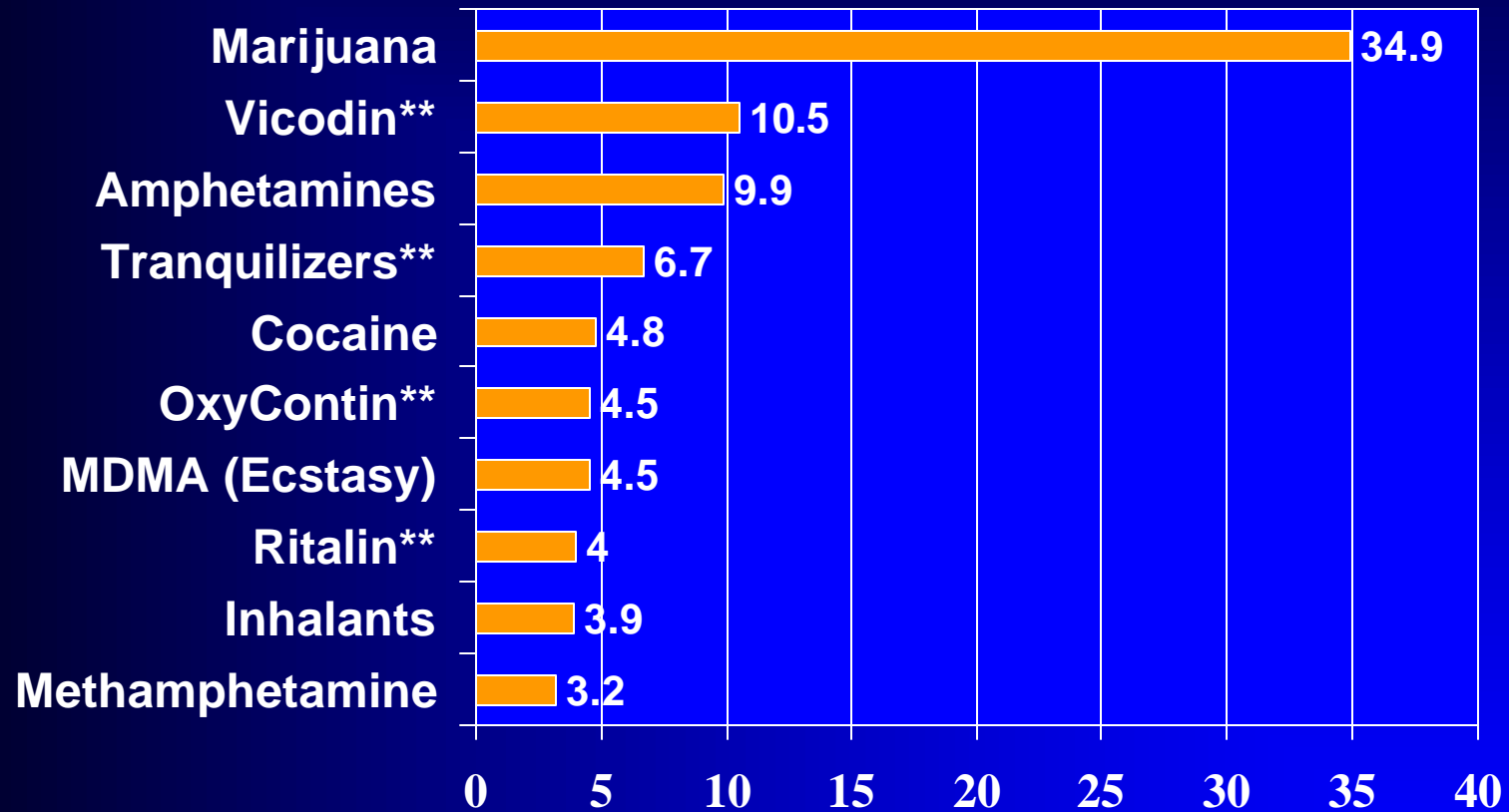


*11% Decline 2001 to 2003*

# Percent of Students Reporting Any Illicit Drug Use in Past Year, by Grade

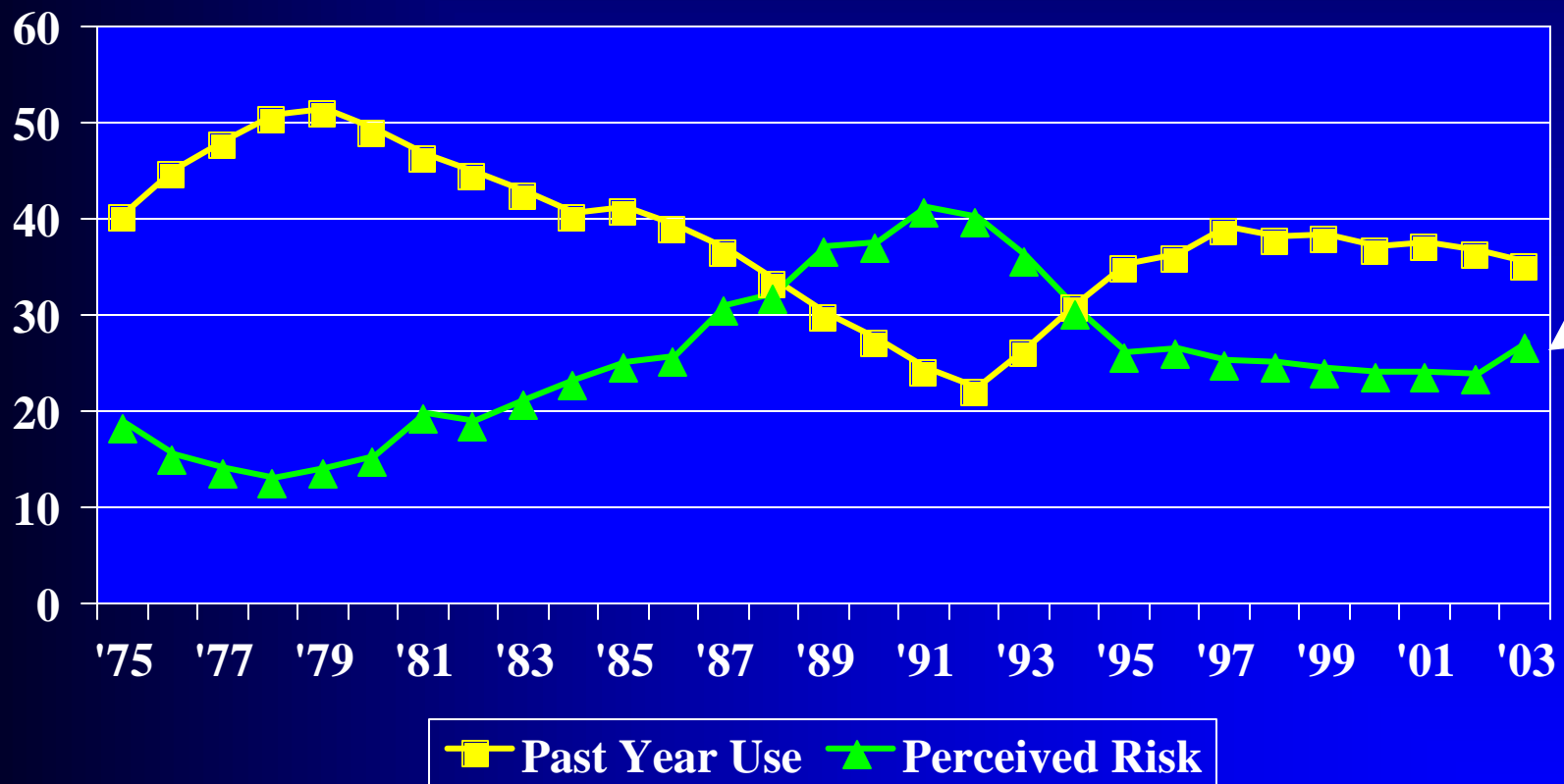


# Ranking of Illicit Drugs Among 12<sup>th</sup> Graders, Past Year Use, 2003



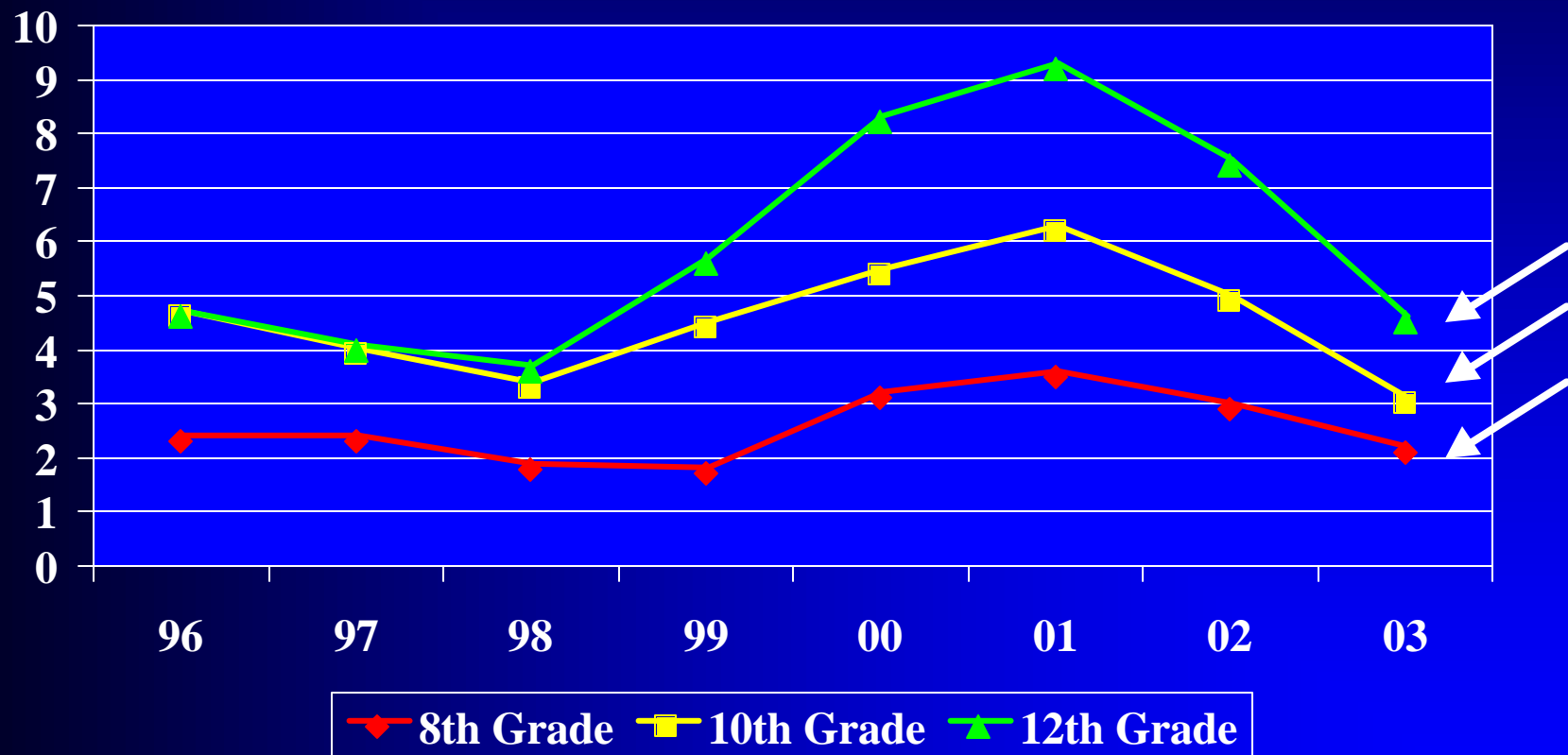
\*\*Nonmedical use.

# 12<sup>th</sup> Graders' Past Year Marijuana Use vs. Perceived Risk of Occasional Marijuana Use

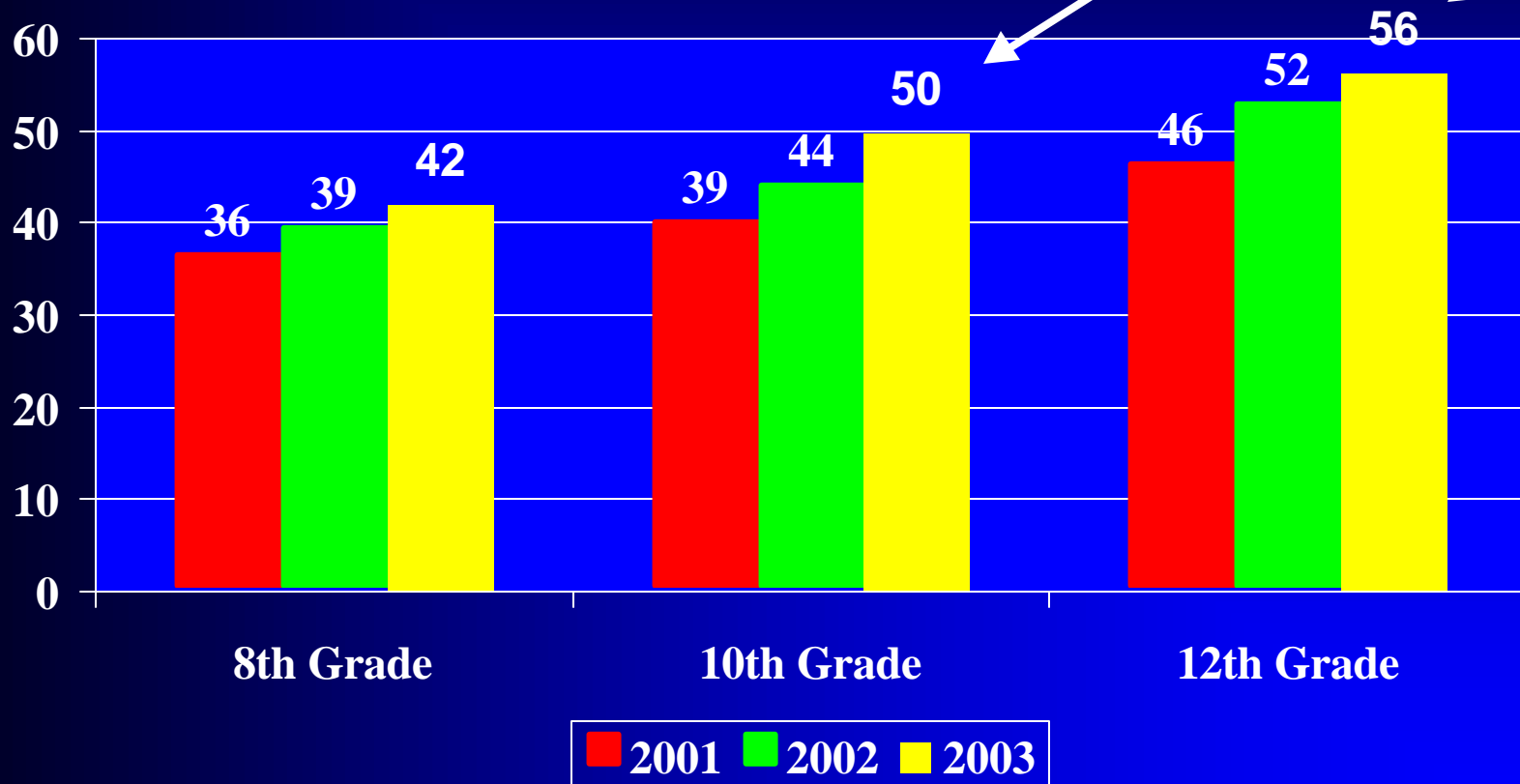




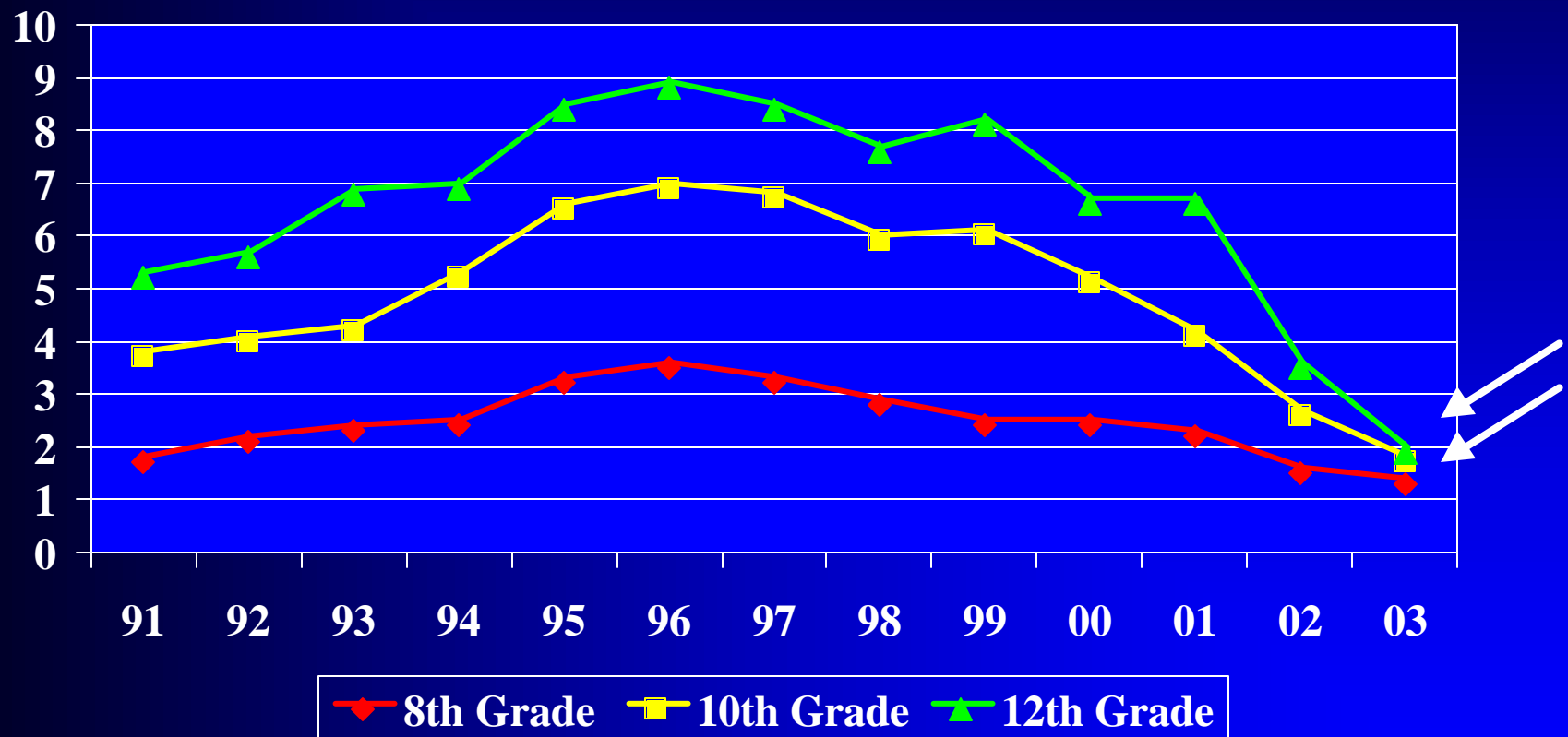
# Percent of Students Reporting Past Year Use of MDMA (Ecstasy), by Grade



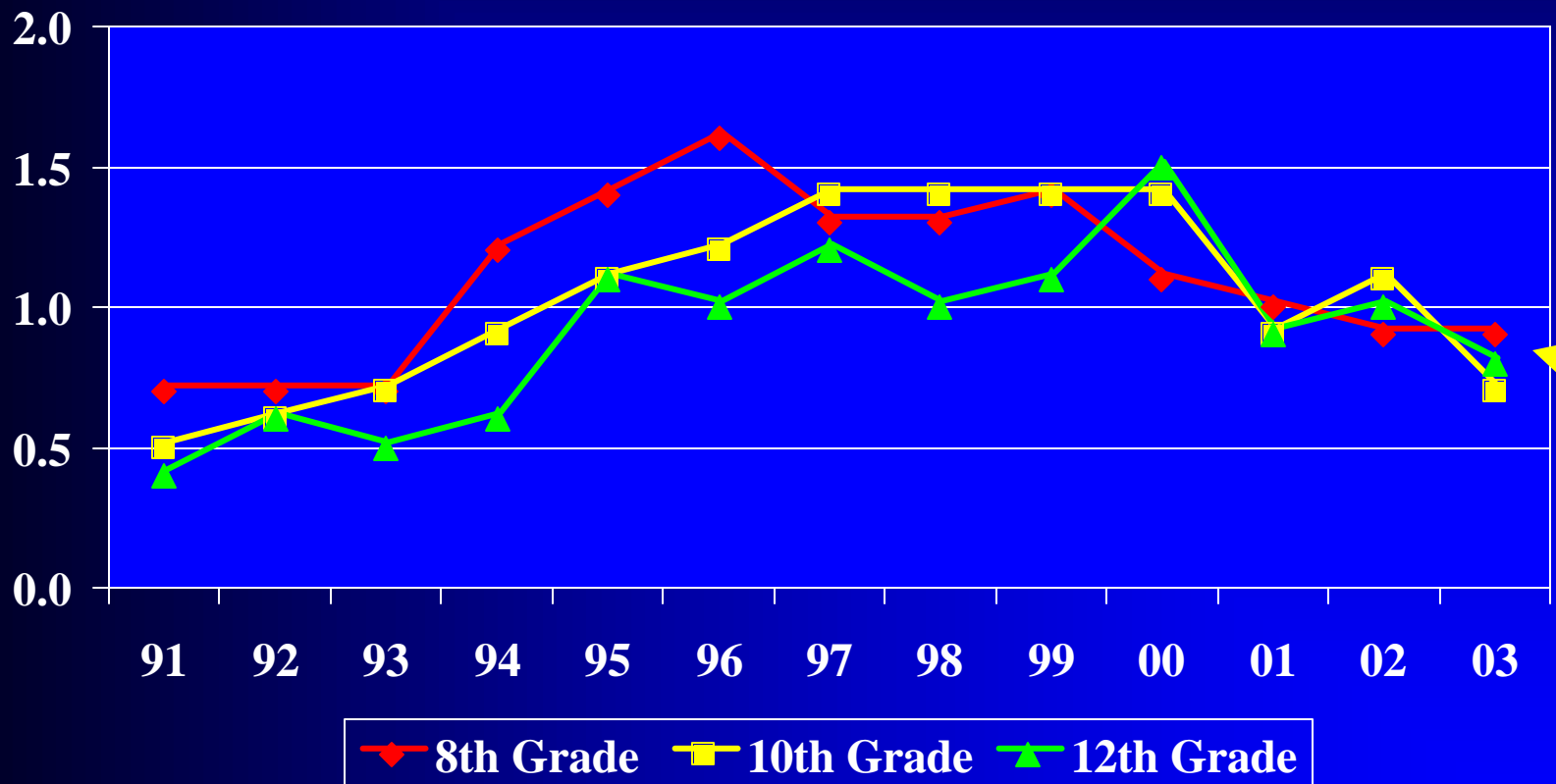
# Perceived Risk of Trying MDMA (Ecstasy) Once or Twice, by Grade



# Percent of Students Reporting Use of LSD in Past Year, by Grade

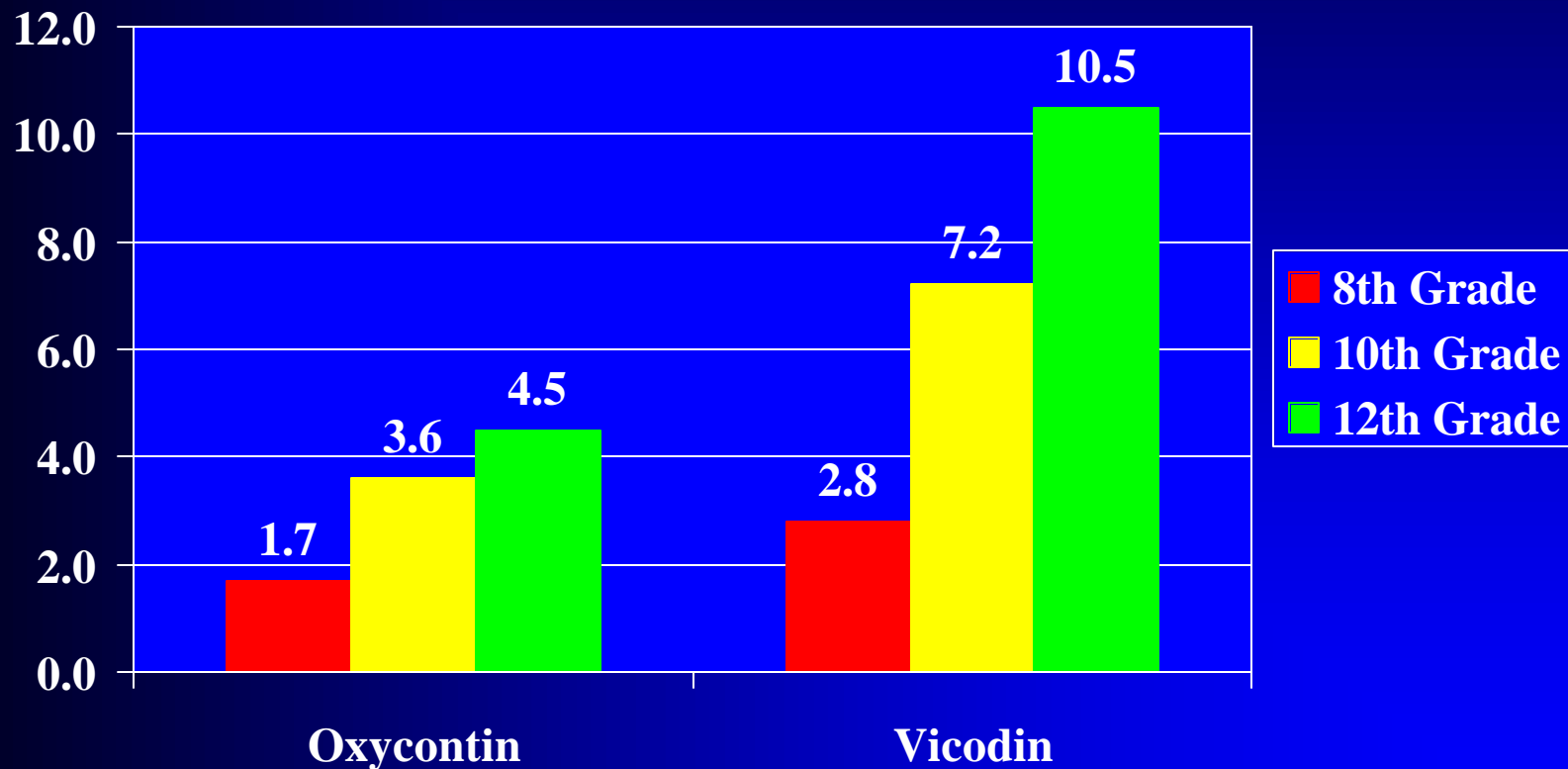


# Percent of Students Reporting Use of Heroin in Past Year, by Grade

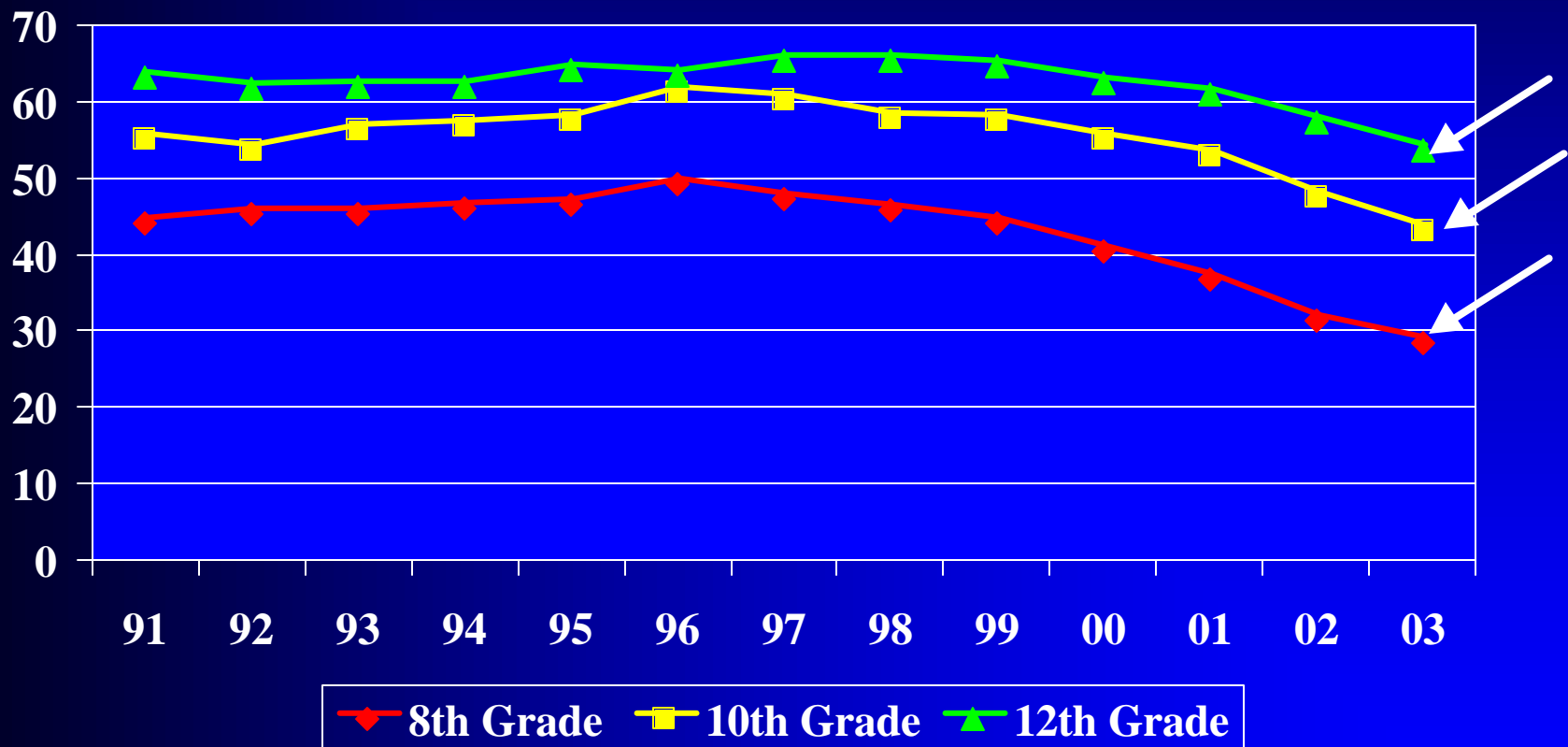


Differences from 2001 to 2002 are not statistically significant.

# Percent of Students Reporting Nonmedical Use of Oxycontin and Vicodin in Past 12 Months in 2003



# Percent of Students Reporting Smoking Cigarettes in Lifetime, by Grade

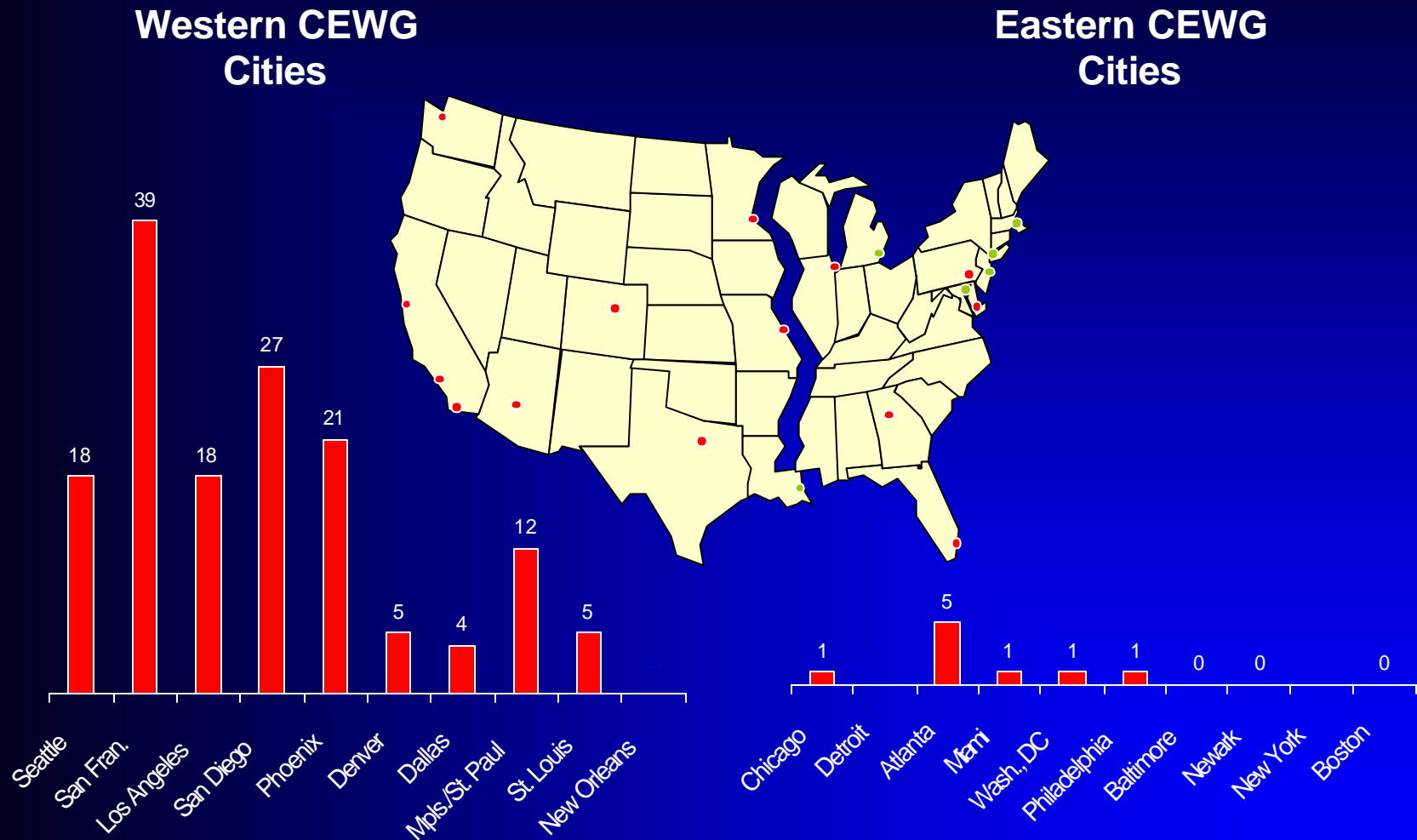


# NIDA's Community Epidemiology Workgroup (CEWG)

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- Consortium of Public Health Experts from 21 sentinel cities/regions
- Meet every six months
- Synthesize data from various surveillance sources such as:
  - Hospitals
  - Treatment
  - Medical Examiner
  - DEA
  - Arrest drug use

# Rates of Methamphetamine ED Mentions Per 100,000 Population by CEWG Area: 2001



<sup>1</sup> Dots (...) indicate that an estimate with a relative standard error greater than 50 percent has been suppressed.

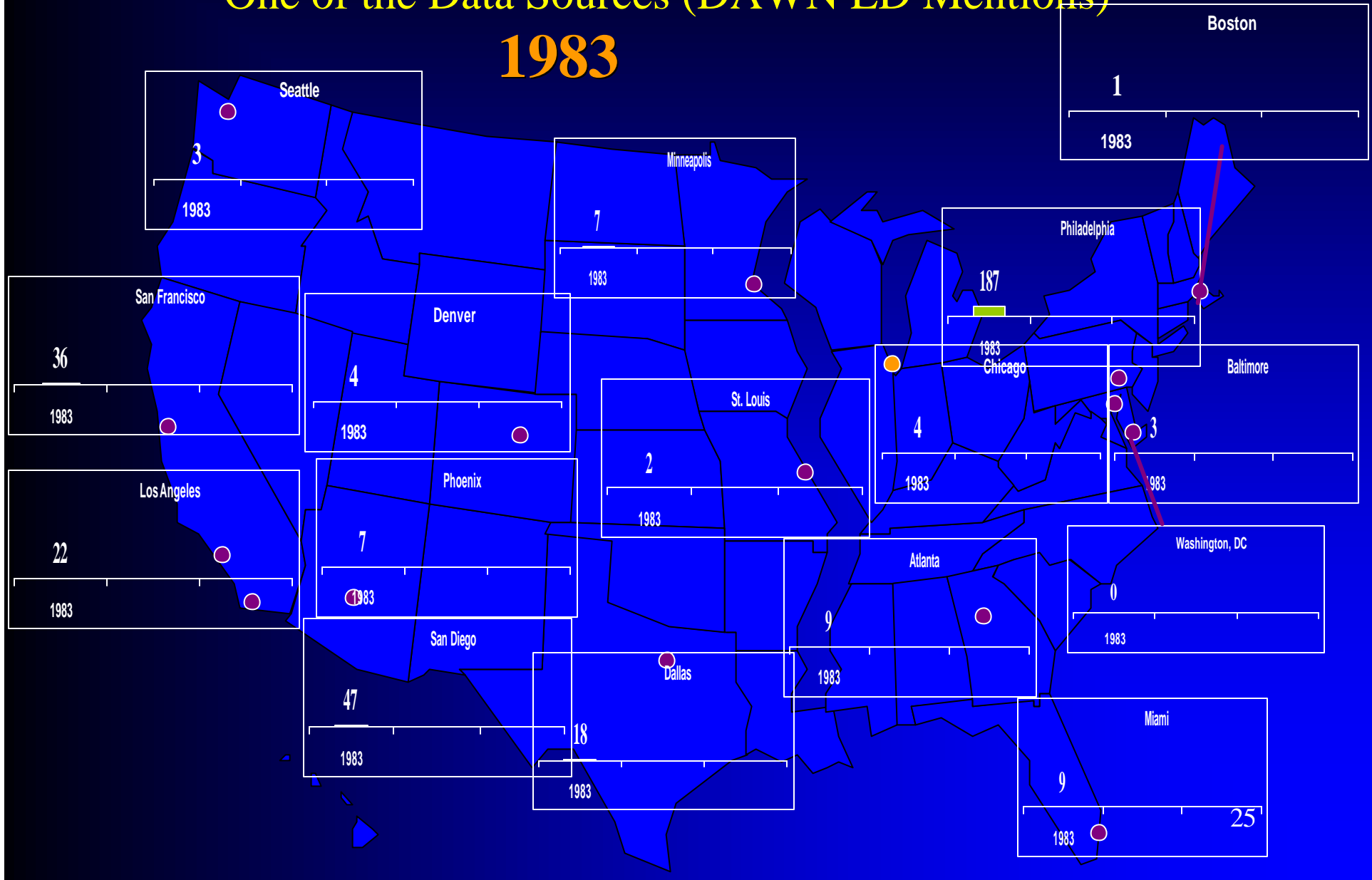
SOURCE: DAWN, OAS, SAMHSA



# CEWG: Monitoring Methamphetamine Abuse

One of the Data Sources (DAWN ED Mentions)

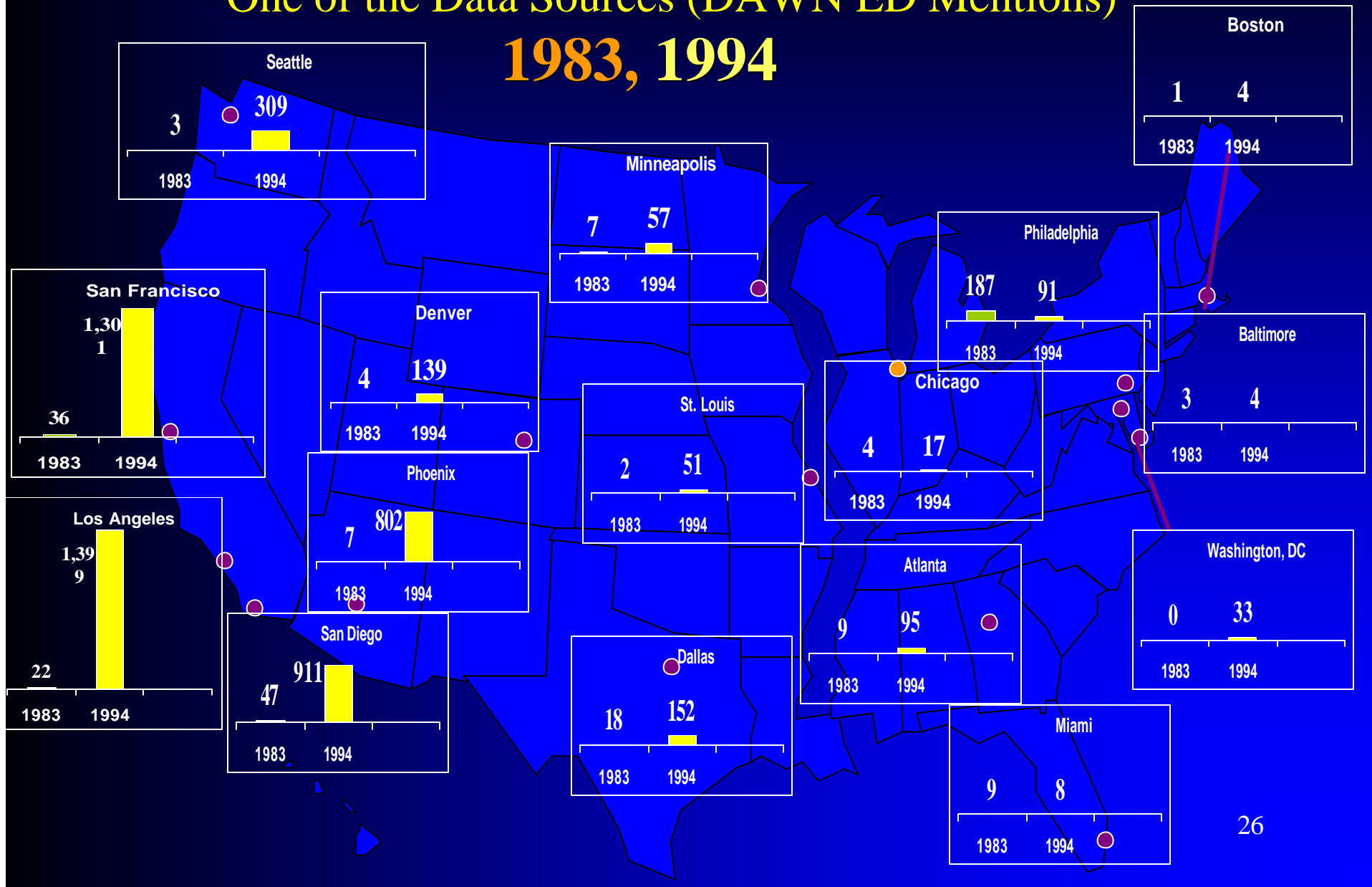
1983



# CEWG: Monitoring Methamphetamine Abuse

One of the Data Sources (DAWN ED Mentions)

1983, 1994



# CEWG: Monitoring Methamphetamine Abuse

One of the Data Sources (DAWN ED Mentions)

1983, 1994, 2001

